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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO.            |
|--|-------------|----------------------|---------------------------------|-----------------------------|
| 10/761,272   | 01/22/2004  | Fumihiro Fukae       | 0951-0131P                      | 2587                        |
| 2292 7590 12/17/2007<br>BIRCH STEWART KOLASCH & BIRCH<br>PO BOX 747<br>FALLS CHURCH, VA 22040-0747 |             |                      | EXAMINER<br>BURD, KEVIN MICHAEL |                             |
|  |             |                      | ART UNIT<br>2611                | PAPER NUMBER                |
|  |             |                      | NOTIFICATION DATE<br>12/17/2007 | DELIVERY MODE<br>ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/761,272 | <b>Applicant(s)</b><br>FUKAE, FUMIHIRO |  |
|                              | <b>Examiner</b><br>Kevin M. Burd     | <b>Art Unit</b><br>2611                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Drawings***

2. Figures 15-19 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

3. The disclosure is objected to because of the following informalities: numerous run-on sentences are recited in the specifications. Examples of these run-on sentences are stated in paragraphs 0042, 0044-0046, 0048-0081 and 0085.

Appropriate correction is required.

***Claim Objections***

4. Claims 38 and 39 are objected to because of the following informalities: "any one of claims 1" is recited in line 3. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: all of the steps in the method. Claim 39 does not recite any method steps.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-9, 15, 16, 18, 19, 21, 24, 33, 34 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukae et al (US 2002/0199051).

Regarding claims 1, 4 and 5, Fukae discloses a transceiver circuit capable of transferring data at a transfer rate (abstract). The transceiver comprises a speed

negotiation state machine having a phase for determining a maximum transfer rate for a channel (paragraph 0065). The determination is carried out through the exchange of a signal with a remote user and the data transfer can be carried out at a higher rate than the rate of the signal used to determine the speed (claim1, page 12). This is also shown in figure 4 where a higher speed is indicated between the nodes. Errors are measured by an error detection circuit (paragraph 0069). The maximum transfer rate is set to a lower transfer speed than the maximum operational speed of a transceiver in the case where a channel of a high error rate is used (paragraph 0090). After the transfer rate change, the error rate is measured to ensure the error rate is within a predetermined range. When this range is maintained, the speed will not change (paragraph 0076 and 0077) and a new data transfer rate does not have to be negotiated.

Regarding claims 2, 6 and 9, as stated above, the errors are counter to determine the error rate (paragraph 0069). A timer is used in the speed negotiation system (figures 5, 6, 9 and 10).

Regarding claims 3 and 7, the transfer rate is compared to a minimum transfer rates. Table 1 discloses the possible transfer rates. Paragraph 0098 discloses the quality is determined and a change in transmission speed is made if necessary.

Regarding claim 8, as stated above, the errors are counter to determine the error rate (paragraph 0069). A timer is used in the speed negotiation system (figures 5, 6, 9 and 10). The circuit is OP I,Link compliant (paragraph 0069).

Regarding claims 15 and 18, Fukae discloses the circuit is OP I,Link compliant (paragraph 0069). As stated above, once a data transfer rate is established, the rate will

not change again until the error rate falls out of the predetermined range. When the rate is established, all components will be notified by a control signal. This control signal will be the "TPBIAS".

Regarding claims 16 and 19, as stated above, the errors are counter to determine the error rate (paragraph 0069). A timer is used in the speed negotiation system (figures 5, 6, 9 and 10).

Regarding claims 21 and 24, Fukae discloses the circuit is OP I,Link compliant (paragraph 0069). As stated above, once a data transfer rate is established, the rate will not change again until the error rate falls out of the predetermined range. When the rate is established, all components will be notified by a control signal. This control signal will be the "TPBIAS". If the channel quality is poor, the rate can be changed to a lower rate (paragraph 0099). If the channel quality remains in a predetermined range, no additional rate changes will take place.

Regarding claim 33, Fukae discloses a transceiver circuit capable of transferring data at a transfer rate (abstract). The transceiver comprises a speed negotiation state machine having a phase for determining a maximum transfer rate for a channel (paragraph 0065). The determination is carried out through the exchange of a signal with a remote user and the data transfer can be carried out at a higher rate than the rate of the signal used to determine the speed (claim 1, page 12). This is also described in paragraph 0098 where a lower speed is indicated between the nodes. Errors are measured by an error detection circuit (paragraph 0069). The maximum transfer rate is set to a lower transfer speed than the maximum operational speed of a transceiver in

the case where a channel of a high error rate is used (paragraph 0090). After the transfer rate change, the error rate is measured to ensure the error rate is within a predetermined range. When this range is maintained, the speed will not change (paragraph 0076 and 0077) and a new data transfer rate does not have to be negotiated.

Regarding claim 34, as stated above, the errors are counter to determine the error rate (paragraph 0069). A timer is used in the speed negotiation system (figures 5, 6, 9 and 10).

Regarding claim 38, Fukae discloses the circuit stated above. Fukae discloses a method of implementing that circuit.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10-14, 17, 20, 22, 23, 25-32 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukae et al (US 2002/0199051) in view of Peponides (US 5,790,941).

Regarding claims 10-14, 17, 20, 22, 23, 25-32 and 35, Fukae discloses the circuit stated above. Fukae does not disclose disconnecting, suspending or turning off the power supply to portions of the circuit. Peponides discloses a communication apparatus

that measures the quality of a received signal. The quality is determined based on comparison of different signal parameters. When the received signal is of a predetermined quality, the circuit will enter a sleep mode. The sleep mode is advantageous since elements of the transceiver can be powered down. This will save power and reduce operational costs. The elements that are powered down are effectively disconnected from the powered portions of the transceiver. For this reason, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the sleep mode components of the transceiver of Peponides into the circuit of Fukae. The circuit will be powered up when conditions dictate.

Regarding claims 36 and 37, Fukae discloses the time used in the timers is fixed (figures 5, 6, 9 and 10). Fukae does not disclose the length of this time period. The length of this time is a design choice. It would have been obvious to use any amount of time that will establish the amount of time between transmissions and the amount of time needed to determine the transmission speed. More time would allow for a more accurate measure of the status of the channel. Less time will allow the circuit to function faster.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.



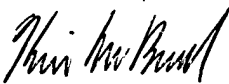
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin M. Burd  
12/10/2007

  
**KEVIN BURD**  
**PRIMARY EXAMINER**